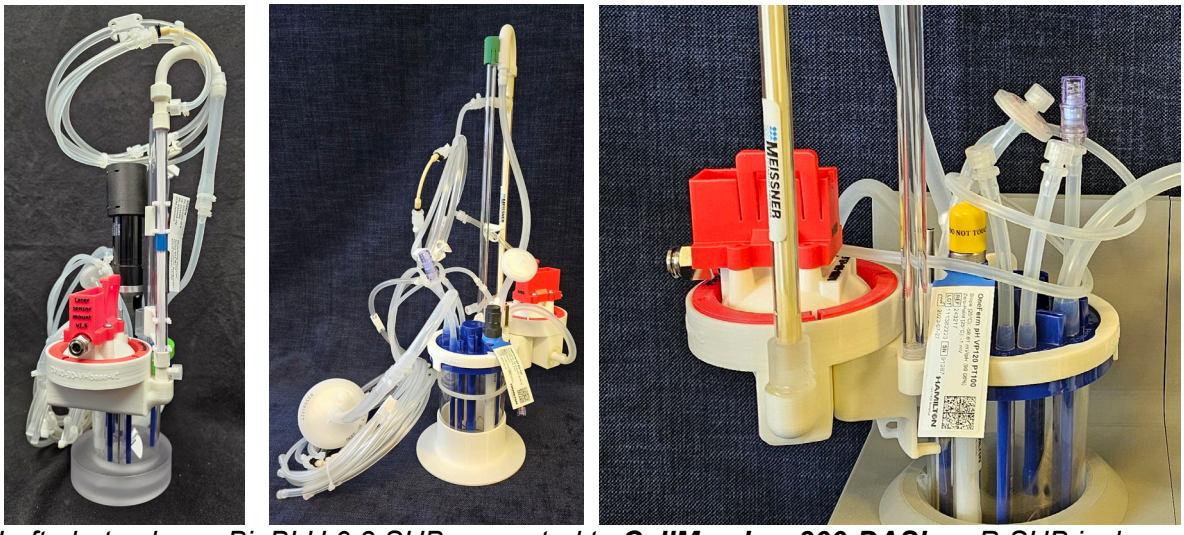
TOP text …… 80-200 ml parallel TFF Perfusion-SUB
2nd line text …… **Parallel operating 300 ml P-SUB for TFF method offer**
Date: 2026-06-25
Author: PS

- Revolutionizing **CellMembra-300-DASbox** operating TFF integrating Clio SUP with SepraPor® HFF (Hollow-Fibre-Filter) directly into the SUP reducing dead volume – even without occupying a precious PG13 port !!!!
- Direct coupled 110 cm2 HFF to SUP with innovative LASER guided Clio diaphragm Single-Use-Pump reduced shear stress, and well known HFF fouling



*Left photo shows BioBLU 0.3 SUB converted to **CellMembra-300-DASbox** P-SUB incl Maxon motor. Center photo one CellMembra-300 (ver-10) with the blue head plate and visible the Clio CM80 SUP. Right photo of **CellMembra-300-DASbox** illustrating the in SUP integrated SepraPor HFF eliminating Luer-Loc hereby reducing Luer-Loc causing significant shear force stress.*

INSIDE the SUB the **CellMembra-300-DASbox** integrates:

- SepraPor® HFF C012 cartridge (manufactured by Meissner® Corp) with pore 0.2 µm, 110 cm^2 area, 1 mm lumen inlet integrated directly on Clio OneWay-Single-Use-Pump (O-SUP)
- Two liquid level sensors
- Extra deep-tube as SUP inlet and HFF return

OUTSIDE the SUB the **CellMembra-300-DASbox** integrates:

- Based on customized BioBLU® 0.3 batch SUB designed with magnetic HPD for the DASbox. Aeration, agitation, and process control remain based on the standard BioBLU® 0.3c and chosen DASbox® configuration.
- Clio TM80 SUP position eliminates dead volume
- Hoses in-mass covering any need
- OneFerm pH sensor with K8 connection included mounted in PG13 port
- One PG13 port free

The P-SUB ver-10 features:

- The complete and pre-assembled mini-P-SUB packed in dual film bags and precision irradiated – forget the autoclave
- P-SUB dim OD76 x 120 mm for Working Volume (WV) ranging from 80 ml up to 200 ml
- Part of DASbox is the MP8 peristaltic pump module - the integrated Pharmed/Biomed pump hoses are selectable ID 1.0 (media exchange) or 0.5 (addition for pH control)

- Thermal control, agitation, aeration, media addition as offered by DASbox

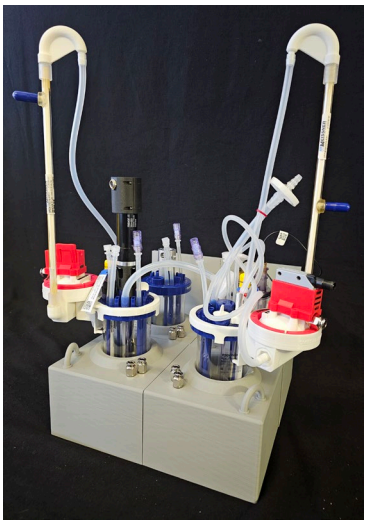
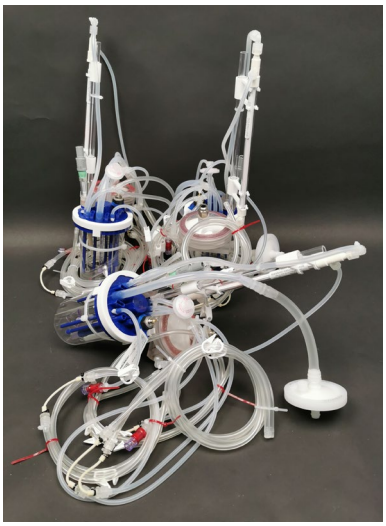
Benefits:

1. Clotho drive unit offer controlled tangential flow of any broth volume, number of strokes and velocity fully programmable, accurately measured and fully repeatable – no process guessing – check out Clotho here - https://perfusecell.com/perfusion-bioreactors/diaphragm-pump-drive-units-41
2. SUBmerged™ and Direct-Fit™ HFF eliminating shear stress caused by conventional Luer-Lok™ fittings

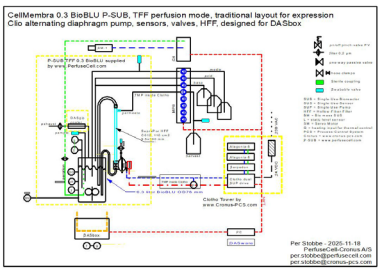
Installation (no hood needed)

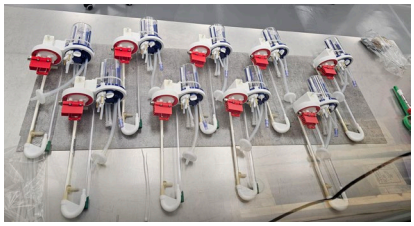
1. Unpack and insert the **CellMembra-300-DASbox** in DASbox
2. Connect all the hoses and sensors – being a big job !
3. Clamp in the LASER sensor in the red Clio socket and connect to Clotho
4. Don't forget to pre-wet HFF, as usual, by adding 200 ml suitable liquid into the SUB. Activate Clotho for 15 strokes and pump entire volume out through the permeate port by MP8 peri pump

Find Tips & Tricks here - https://perfusecell.com/perfusion-support/tips-tricks-in-details/tips-tricks-small-volume

*The **CellMembra-300-DASbox** is delivered dual bag packed and E-beam irradiated. Heavily equipped with an extensive hose assembly ready to install and use in the DASbox - remember to wet/rinse the HFF before use. Example of how CellMembra-300 P-SUBs in parallel inserted into the DASbox originally designed for OD76 mm STR.*





Flow-Chart illustrates the setup with Clotho Tower (in the yellow box) operating the LASER controlled Clio-SUP. Clotho keep an eye on the TMP and ensure regular cleaning of the HFF. Center photo 8 pcs P-SUBs in parallel. operated, controlled by dual Clotho towers and DASware or directly from the Clotho software independent of DASware. The pressurized air and vacuum delivered by dual Alagonia and one Sarpedon for each tower. A photo of a CellMembra-300 Clio SUP lot from production.

Download documentation - if 3D PDF checkout here - https://perfusecell.com/download-product-info

Some conclusions for the CellMembra-300 BioBLU:

- The oxygenation is based on the BioBLU 0.3 standard one hole gas inlet limiting the max suspended cell density ranging 50-75 m/cells/ml

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